

## **REMARKS**

With entry of this amendment, claims 1, 3 to 100, and 102 are pending in this application. Claims 1 to 90 stand rejected and claims 91 to 101 have been withdrawn from consideration by the Examiner. Applicants are herein canceling claims 2 and 101, without prejudice or disclaimer, and amending claims 1, 6, 18, 21, 27, 29, 33, 49, 51, 53, 55, 57, 77, 84, 87, 88, and 90. Claim 102 is newly added. No new subject matter has been added.

### **Claim Amendments**

Applicants are herein amending claims 1, 21, and 27 to delete non-elected subject matter, including the compound of formula XIII, without prejudice or disclaimer. Applicants reserve the right to file one or more divisional applications to the canceled subject matter.

Applicants are herein canceling claim 2, without prejudice or disclaimer, as redundant with claim 1 in view of the amendment to claim 1. Applicants are also herein canceling independent claim 101, without prejudice or disclaimer, in favor of claim 102, which may now properly depend from claim 1, as a consequence of the restriction requirement and cancellation of non-elected subject matter.

Applicants are herein amending claim 6 to clarify certain aspects that applicants regard as their invention.

Applicants are herein amending claims 1, 18, 29, 33, 49, 51, 53, 55, 57, 77, and 84 to delete, without prejudice or disclaimer, the spiroalkyl moiety as a possible functional group formed when  $R^{3a}$  and  $R^{3b}$  are taken together.

Applicants are herein amending claims 87 and 88 to replace the phrase "at least one" with "one or more."

Applicants are herein amending claim 90 to specify that the invention is directed to "A process for preparing an antimicrobial compound."

Applicants submit that no new matter is introduced by the amendments to the claims and that they are fully supported by the specification, as originally filed.

**Rejection under 35 U.S.C. § 112, second paragraph**

Claims 1 to 90 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite for:

- recitation of the phrase “R<sup>3a</sup> and R<sup>3b</sup> taken together form a spiroalkyl” in claim 1;
- recitation of the phrase “sulfonamide or sulfone” in claim 89;
- recitation of the term “compounds” in claim 90;
- recitation of the phrase “under conditions sufficient to provide” in claim 90; and
- recitation of the phrase “at least one compound according to claim ...” in claims 87 and 88 (Office Action specified claims 17 and 18).

Applicants traverse the rejections in light of the amendments and following remarks.

Applicants submit that recitation of the phrase “R<sup>3a</sup> and R<sup>3b</sup> taken together form a spiroalkyl” in claim 1, is not vague or indefinite, but clearly refers to compounds in which two rings are connected through a single common carbon atom, as defined on page 11 of the specification. However, as this arises when R<sup>3a</sup> and R<sup>3b</sup> taken together form a ring in compounds of formula XIII, and since the subject matter of triazines (formula XIII compounds) has been deleted, applicants are herein amending claim 1 to delete the term “spiroalkyl” from claims 1, 18, 29, 33, 49, 51, 53, 55, 57, 77, and 84 for the sole purpose of expediting prosecution. Thus, the rejection of the claims with respect to the term “spiroalkyl” is rendered moot.

The Office alleges that there is no antecedent basis in either claim 1 or 87 for the term “sulfonamide” or “sulfone” used in claim 89. Applicants respectfully assert that claim 89 has been misinterpreted and that no antecedent basis for the term “sulfonamide” or “sulfone” is required. Claim 89 is directed to a composition further comprising another component (*i.e.*, a sulfonamide or sulfone). Since it is the first time either term has been used, neither requires antecedent basis in claim 1 or 87. Applicants respectfully request that this rejection be withdrawn.

The Office rejects claim 90 as allegedly indefinite for specifying the process is useful for making “compounds.” While applicants are not conceding that the preamble is indefinite

and solely for the purpose of expediting prosecution, applicants are herein amending the preamble of claim 90 to specify “A process for preparing an antimicrobial compound,” thereby rendering the rejection moot.

In addition, the Office rejects claim 90 as allegedly indefinite for specifying the phrase “under conditions sufficient to provide.” Applicants do not concede that the phrase renders the claim indefinite, and solely for the purpose of expediting prosecution, applicants herein amend claim 90 to delete this phrase, thereby rendering the rejection moot.

The Office rejects claims 87 and 88 (Office Action inadvertently stated claims 17 and 18), as allegedly indefinite for use of the phrase “at least one compound according to claim . . .” and suggests replacing the phrase with the phrase “one or more.” Applicants submit there is no difference between the phrases “at least one” and “one or more”. As applicants believe that there is no difference in the phrases and solely for the purpose of expediting prosecution, applicants are amending claims 87 and 88 to specify “one or more,” as suggested by the Office, thereby rendering the rejection moot.

Applicants respectfully submit that claims 1 and 30 to 90, as amended, are definite and request withdrawal of the rejection under 35 U.S.C. § 112, second paragraph.

#### **Rejection under 35 U.S.C. § 112, first paragraph**

Claim 90 is rejected as allegedly not enabled under 35 U.S.C. § 112, first paragraph. Applicants traverse the rejection.

More specifically, claim 90 is rejected on the grounds that the use of substituents SH, NH, NH<sub>2</sub>, or NH<sub>SO<sub>2</sub></sub>H on the R<sup>1</sup> group is not reasonably enabled because these groups are capable of attacking the cyano group. Applicants submit that the specification, along with the general knowledge of those skilled in multi-step organic synthesis, enables the process of claim 90 where R<sup>1</sup> is SH, NH, NH<sub>2</sub>, or NH<sub>SO<sub>2</sub></sub>H. Applicants submit that the enablement requirement under 35 U.S.C. § 112, first paragraph, does not require 100% yield, only that the reaction will work. Furthermore, multi-step organic synthesis is replete with numerous technical reviews, treatises, and examples where utilization of protective groups facilitates the preferential reaction of one functionality versus another. Non-limiting examples of

typical reagents or conditions of use can be found, for example, in Larock, R. C. *Comprehensive Organic Transformations*, VCJ Publishers, Inc. NY, (1989) and Greene, T. W. and Wuts, P. G. M. *Protective Groups in Organic Synthesis*, 2<sup>nd</sup> Ed., John Wiley & Sons, Inc. NY, (1991), portions of which were incorporated into the application by reference, in their entireties into the specification. Applicants submit that one ordinarily skilled in the art, when armed with the present specification, and public knowledge available at the time of filing, would be able to, without undue experimentation, make the compounds of the invention.

Accordingly, applicants respectfully submit that claim 90 is enabled and request withdrawal of the rejection under 35 U.S.C. § 112, first paragraph.

Applicants continue to assert their understanding that the earlier election was made to aid the Examiner in conducting a search and examination of the claimed subject matter, and is not to be construed as limiting the scope of Applicants' claims. It continues to be Applicants' understanding also that, if the elected subject matter was found to be allowable over the prior art, the search and examination would be expanded to cover other species, until it includes the full scope of the generic claims of the invention.

It is also applicants' present understanding that the claims of Groups IV will be rejoined with elected Group I as a matter of right, provided that they are limited to the scope of the allowable product claims of Group I. There is no indication in the pending Office Action that applicants' understanding was deemed incorrect, nor any mention of applicants' respectful traversal of the restriction requirement is Applicants' understanding was so deemed. Therefore, applicants expect that, to the extent the claims of Group IV encompass the allowable subject matter of claim 1, they will be rejoined.

### **Conclusions**

Applicants respectfully request entry of the foregoing amendment to the claims. Applicants believe that the foregoing amendment constitutes a complete and full response to the Office Action of record. Accordingly, reconsideration and allowance of Claims 1, 3 to

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90, and 102 are requested respectfully. Furthermore, applicants request rejoinder of claims 91 to 100.

If the Examiner is of a contrary view, the Examiner is respectfully requested to contact the undersigned representative at (215) 557-5951.

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